

## **AMENDMENTS TO THE SPECIFICATION:**

**Please amend the paragraph beginning on page 7, line 24, as follows:**

The direct bonding by which crystal members 5a, 5b, 6 are joined together will be described below. The direct bonding is achieved by a process in which two members are ~~bonded~~ bonded to each other by a chemical bond between atoms on the surface of one of the members and atoms on the surface of the other member. According to the present embodiment, since the crystal members made of quartz are directly ~~bonded~~ bonded to each other, a siloxane bond (Si-O-Si) is formed between those members. Details of the direct bonding are disclosed in Japanese laid-open patent publication No. 11-316125 (JP-A-11-316125), for example. In the present embodiment, the surfaces to be bonded of crystal members 5a, 5b, 6 are polished to a mirror finish, and then chemically treated so that the surfaces to be bonded are modified by a hydrophilic group, typically an -OH group (hydroxyl group). Then, the modified surfaces are temporarily joined by an optical contact, held in abutment against each other, and then heated. When they are heated, H<sub>2</sub>O is released from the hydroxyl group on both surfaces by dehydration, and a siloxane bond (Si-O-Si) is formed between the surfaces. The crystal members are now bonded at an atomic level by the siloxane bond.